

ABSTRACT OF THE DISCLOSURE

Disclosed herein is a fast response fluid flow control valve/nozzle that combines the technology used to rupture the frangible discs found in pressurized container-based fire protection/ suppression systems with that found in fixed pipe spray/sprinkler systems. The apparatus' design projects a small, localized pressure wave at the underside of a frangible disc that is sufficient to rupture the disc in a very rapid manner. The present invention generally comprises an assembly of six primary components; a chamber base, a jet core threaded into the chamber base, a commercially-available rupture/frangible disc assembly, a disc retention ring, a nozzle port threaded onto the chamber base to hold the retention ring and rupture disc against the jet core and to tie the components together as a unitized assembly, and a pressure cartridge actuator.

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